

Vermont Career Technical Education (CTE) Program Critical Proficiencies

Pre-Tech Exploratory CTE Programs

The Critical Proficiencies identify the essential knowledge, skills, and abilities that VT CTE students need to demonstrate (1) to be program completers, and (2) to be prepared for future learning. Critical proficiencies promote high expectations for all students, and support students' personal, professional, and academic development.

The Pre-Tech Exploratory (PTE) Program template includes:

- PTE Program Description
- Career Ready Practices
- PTE Program Standards
- PTE Academic Alignment
- PTE Program Elements

Advance CTE Common Career Technical Core - Career Ready Practices

The Career Ready Practices were developed from a state-led initiative sponsored by the National Association of State Directors of Career Technical Education Consortium (NASDCTEC). The Career Ready Practices include statements that address the knowledge, skills, and dispositions that are important to becoming career ready.

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline, or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. (NASDCTEC, 2012)

The Career Ready Practices

- are applicable to Pre-Tech Exploratory Programs.
- align with the VT Transferable Skills Proficiency-Based Graduation Requirements (PBGRs) and VT Portrait of a Graduate.

PTE Program Standards

The PTE Program Standards build on and continue the Career Ready Practices with knowledge and skills that are learned and applied within a standards-based CTE Pre-Tech Exploratory program that integrates classroom and laboratory instruction.

PTE Academic Alignment

The Pre-Tech Exploratory program template includes academic alignment with the VT Content-Area Sample Graduation Proficiencies as part of VT's Proficiency-Based Graduation Requirements (PBGRs).

Pre-Tech Exploratory (PTE) Programs Critical Proficiency Template

Critical Proficiency Template:	Attributes:
Program-Area Description	For VT Pre-Tech Exploratory CTE Programs
Common Career Technical Core - Career Ready Practices	<ol style="list-style-type: none">1. Act as a responsible and contributing citizen and employee.2. Apply appropriate academic and technical skills.3. Attend to personal health and financial well-being.4. Communicate clearly and effectively and with reason.5. Consider the environmental, social, and economic impacts of decisions.6. Demonstrate creativity and innovation.7. Employ valid and reliable research strategies.8. Utilize critical thinking to make sense of problems and persevere in solving them.9. Model integrity, ethical leadership, and effective management.10. Plan education and career paths aligned to personal goals.11. Use technology to enhance productivity.12. Work productively in teams while using cultural global competence.
Pre-Tech Exploratory CTE Program Technical Standards	<ul style="list-style-type: none">• Half-Day Programs• Full-Day Programs
Academic Alignment	With VT Content-Area Graduation Proficiencies
Pre-Tech Exploratory CTE Program Elements	Demonstration and application: <ul style="list-style-type: none">• Dual Enrollment/Fast Forward Courses

Critical Proficiency Template:	Attributes:
	<ul style="list-style-type: none"> • Industry Recognized Credentials (IRCs) • Portfolio/Personalized Learning Plan

VT Pre-Tech Exploratory CTE Programs

Students in **Pre-Tech Exploratory** programs have in-depth, hands-on experiences in career exploration, CTE pathway decision making, safety, and core CTE program preparatory elements.

The standards in this program area are designed to prepare students for continuation in VT CTE programs of study. Students engage in an instructional program that integrates academic and technical preparation, career exploration, and preparation for postsecondary education and/or training. Knowledge and skills are learned and applied within a standards-based CTE program that integrates classroom and laboratory instruction.

Advance CTE Common Career Technical Core - Career Ready Practices

Advance CTE Common Career Technical Core - Career Ready Practices:	Aligned with VT Transferable Skills Proficiency-Based Graduation Requirements (PBGRs) and VT Portrait of a Graduate
1. Act as a responsible and contributing citizen and employee.	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community, and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
2. Apply appropriate academic and technical skills.	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.

<p>Advance CTE Common Career Technical Core - Career Ready Practices:</p>	<p>Aligned with VT Transferable Skills Proficiency-Based Graduation Requirements (PBGRs) and VT Portrait of a Graduate</p>
<p>3. Attend to personal health and financial well-being.</p>	<p>Career-ready individuals understand the relationship between personal health, workplace performance, and personal well-being; they act on that understanding to regularly practice healthy diet, exercise, and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.</p>
<p>4. Communicate clearly and effectively and with reason.</p>	<p>Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.</p>
<p>5. Consider the environmental, social, and economic impacts of decisions.</p>	<p>Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment, and the profitability of the organization.</p>

<p>Advance CTE Common Career Technical Core - Career Ready Practices:</p>	<p>Aligned with VT Transferable Skills Proficiency-Based Graduation Requirements (PBGRs) and VT Portrait of a Graduate</p>
<p>6. Demonstrate creativity and innovation.</p>	<p>Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.</p>
<p>7. Employ valid and reliable research strategies.</p>	<p>Career-ready individuals are discerning in accepting and using new information to make decisions, change practices, or inform strategies. They use reliable research processes to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.</p>
<p>8. Utilize critical thinking to make sense of problems and persevere in solving them.</p>	<p>Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.</p>
<p>9. Model integrity, ethical leadership, and effective management.</p>	<p>Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' actions, attitudes, and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals, and organizational culture.</p>

Advance CTE Common Career Technical Core - Career Ready Practices:	Aligned with VT Transferable Skills Proficiency-Based Graduation Requirements (PBGRs) and VT Portrait of a Graduate
10. Plan education and career paths aligned to personal goals.	Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience, and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.
11. Use technology to enhance productivity.	Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks - personal and organizational - of technology applications, and they take actions to prevent or mitigate these risks.
12. Work productively in teams while using cultural global competence.	Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural differences to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

**VT Pre-Tech Exploratory CTE Program Technical Standards
Half-Day Programs**

Program Technical Standards:	
1. Safety, Tools, and Equipment	<ul style="list-style-type: none"> a. Practice the basics of safe work habits and use of PPE in the lab space. b. Describe proper use of tools and equipment. c. Establish a clean and organized work environment.

Program Technical Standards:	
2. Communication	<ul style="list-style-type: none"> a. Demonstrate reading and writing skills. b. Effectively utilize electronic and social media. c. Practice collaboration and teamwork skills. d. Demonstrate effective presentation skills.
3. College and Career Exploration	<ul style="list-style-type: none"> a. Engage in assessments and inventories that reveal interests, abilities, and personal goals. b. Explore potential career options, pathways, and goals. c. Explore potential college options and goals.
4. Health and Wellness	<ul style="list-style-type: none"> a. Identify concepts related to physical, social, and emotional health promotion (i.e., exercise, building positive relationships, self-awareness, self-advocacy) to enhance health.
5. Equity and Diversity	<ul style="list-style-type: none"> a. Describe the concepts of social identity and cultural awareness.
6. Financial Literacy	<ul style="list-style-type: none"> a. Describe how personal finance skills impact planning for future goals.
7. Career Development Skills	<ul style="list-style-type: none"> a. Research multiple industries and fields. b. Describe the local labor market and trends. c. Describe professional and ethical workplace behaviors. d. Demonstrate resume writing skills.
8. Community Projects	<ul style="list-style-type: none"> a. Engage in interactions with local business and community.
9. Preparation for Core CTE Programs*	<ul style="list-style-type: none"> a. Identify basic prerequisite academic and technical knowledge and skills related to Core CTE Program(s). b. Demonstrate an ability to engage in project-based learning with feedback and revision. c. Solve problems and think critically in the lab environment.
10. STEAM (Science, Technology, Engineering, Art, Mathematics)	<ul style="list-style-type: none"> a. Demonstrate basic PTE math concepts and skills: measurements. b. Demonstrate basic PTE science concepts and skills. c. Apply technology skills in the lab setting. d. Apply and demonstrate art concepts.

Program Technical Standards:	
	e. Apply and demonstrate engineering concepts (i.e., the design process).
	<p>*Preparation for Core VT CTE Programs List:</p> <ul style="list-style-type: none"> ● Automotive Technology, Diesel Technology ● Advanced Manufacturing, Manufacturing, Mechatronics ● Carpentry, Construction, Building Trades ● Cosmetology ● Culinary Arts ● Digital and Visual Arts ● Diversified Agriculture ● Electrical, HVAC, Plumbing ● Engineering ● Health Science ● Human Services, Childhood Ed, Teacher Ed ● Law, Public Safety, Emergency, Fire Services ● Outdoor Recreation ● Welding

**VT Pre-Tech Exploratory CTE Program Technical Standards
Full-Day Programs**

Program Technical Standards:	Standards for each career path build on and continue the Anchor Standards with more complexity, rigor, and career specificity.
1. Safety, Tools, and Equipment	<ul style="list-style-type: none"> a. Practice the basics of safe work habits and use of PPE in the lab space. b. Describe proper use of tools and equipment. c. Establish a clean and organized work environment. d. Demonstrate CPR and First Aid skills.
2. Communication	<ul style="list-style-type: none"> a. Demonstrate reading and writing skills. b. Effectively utilize electronic and social media. c. Practice collaboration and teamwork skills. d. Demonstrate effective presentation skills.
3. College and Career Exploration	<ul style="list-style-type: none"> a. Engage in assessments and inventories that reveal interests, abilities, and personal goals. b. Explore potential career options, pathways, and goals.

Program Technical Standards:	Standards for each career path build on and continue the Anchor Standards with more complexity, rigor, and career specificity.
	c. Explore potential college options and goals.
4. Health and Wellness	<ul style="list-style-type: none"> a. Identify concepts related to physical, social, and emotional health promotion (i.e., exercise, building positive relationships, self-awareness, self-advocacy) to enhance health. b. Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
5. Equity and Diversity	<ul style="list-style-type: none"> a. Describe the concepts of social identity and cultural awareness. b. Evaluate current events using primary and secondary sources. c. Recognize stereotypes, discrimination, and workplace issues.
6. Financial Literacy	<ul style="list-style-type: none"> a. Describe how personal finance skills impact planning for future goals. b. Demonstrate and apply personal finance skills (i.e., budgets). c. Describe financial institutions, loans, debts, financing, and investing.
7. Career Development Skills	<ul style="list-style-type: none"> a. Research multiple industries and fields. b. Describe the local labor market and trends. c. Demonstrate professional and ethical workplace behaviors. d. Prepare cover letters, resumes, job applications, and participate in interviewing, job fairs.
8. Community Projects	<ul style="list-style-type: none"> a. Engage in interactions with local business and community. b. Demonstrate awareness of community needs. c. Apply service learning skills.
9. Preparation for Core CTE Programs*	<ul style="list-style-type: none"> a. Identify basic prerequisite academic and technical knowledge and skills related to Core CTE Program(s). b. Demonstrate an ability to engage in project-based learning with feedback and revision. c. Solve problems and think critically in the lab environment..

Program Technical Standards:	Standards for each career path build on and continue the Anchor Standards with more complexity, rigor, and career specificity.
10. STEAM (Science, Technology, Engineering, Art, Mathematics)	<ul style="list-style-type: none"> a. Demonstrate PTE math concepts and skills: equations, measurements, graphing, conversions, percentages. b. Demonstrate PTE science concepts and skills: scientific reasoning, data, tables, charts. c. Apply technology skills in the lab setting. d. Apply and demonstrate art concepts. e. Apply and demonstrate engineering concepts (i.e., the design process).
	<p>*Preparation for Core VT CTE Programs List:</p> <ul style="list-style-type: none"> ● Automotive Technology, Diesel Technology ● Advanced Manufacturing, Manufacturing, Mechatronics ● Carpentry, Construction, Building Trades ● Cosmetology ● Culinary Arts ● Digital and Visual Arts ● Diversified Agriculture ● Electrical, HVAC, Plumbing ● Engineering ● Health Science ● Human Services, Childhood Ed, Teacher Ed ● Law, Public Safety, Emergency, Fire Services ● Outdoor Recreation ● Welding

VT Pre-Tech Exploratory CTE Program - Academic Alignment with [VT Content Area Graduation Proficiencies \(PBGRs\)](#)

Graduation Proficiencies:	Indicators:
Half-Day Programs:	
English Language Arts	<p>High School</p> <ul style="list-style-type: none"> 1. Reading: b, d 2. Writing: b 4. Speaking and Listening: a, b 6. Language: a, c

Graduation Proficiencies:	Indicators:
<u>Mathematics</u>	High School 1. Modeling: a 2. Number and Quantity: c
<u>Science</u>	8. Engineering, Technology, and Application of Science: a
<u>Global Citizenship/Social Studies</u>	End of Gr. 12 Inquiry: Constructing compelling and supporting questions: a; Determining helpful sources: a
<u>Health</u>	High School 1. Core Concepts: a, b
Full-Day Programs:	
<u>English Language Arts</u>	High School 1. Reading: b, d, g 2. Writing: b, e 4. Speaking and Listening: a, b 6. Language: a, c
<u>Mathematics</u>	1. Modeling: a, b, c, d 2. Number and Quantity: c
<u>Science</u>	8. Engineering, Technology, and Application of Science: a
<u>Global Citizenship/Social Studies</u>	End of Gr. 12 Inquiry: Constructing compelling and supporting questions: a; Determining helpful sources: a Evaluating Sources and Using Evidence: Gathering and evaluating sources: a
<u>Art: Visual Art</u>	High School 1. Create: a, c
<u>Art: Media Arts</u>	1. Create: a
<u>Health</u>	High School 1. Core Concepts: a, b, c, d

VT Pre-Tech Exploratory CTE Program Elements

Demonstration and Application:	Available Options:
Dual Enrollment/Fast Forward Courses	CCV: Introduction to College and Careers (DEV-0270)
Industry Recognized Credentials (IRCs)	Tier 1: <ul style="list-style-type: none"> ● OSHA-10 ● American Red Cross - CPR/AED ● American Red Cross - First Aid ● Certiport - Internet and Computing Core Fundamentals ● Conover Workplace Readiness ● National Safe Tractor and Machinery Operation Program ● W!SE Financial Literacy
Portfolio/Personalized Learning Plan (PLP)	Varies by CTE Center